AMENDMENT UNDER 37 C.F.R. § 1.111 Attorney Docket No.: Q95593

Application No.: 10/596,656

**AMENDMENTS TO THE CLAIMS** 

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1-11. (canceled).

12. (currently amended): Filtration structure (11) of a particulate filter for exhaust

gases of an internal combustion engine, capable of withstanding successive regeneration phases,

of the type comprising:

- at least first and second filtration elements (15A, 15B), each filtration element being

made of a ceramic material having an inlet face (21), a discharge face (23) and lateral faces (24),

and comprising an assembly of adjacent inlet and outlet conduits which are separated by porous

filtration walls (25)-extending and extend parallel with a longitudinal direction (X-X') from the

inlet face to the discharge face of the filtration element, the inlet conduits, open in the region of

the inlet face and closed in the region of the discharge face, and the outlet conduits, open in the

region of the discharge face and closed in the region of the inlet face, being arranged transposed,

one first planar lateral face (24A) of the first filtration element and one second planar lateral face

(24B) of the second filtration element-are being arranged opposite each other;

- a joint (17) for connecting the said first and second planar lateral faces (24A, 24B)

which extends to each other, said joint extending between the faces, this joint (17) said first and

second lateral faces and comprising a binding agent (41),

wherein said joint further comprises-and reinforcement means (43),

characterized in that said binding agent is a ceramic cement,

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and in that the reinforcement means (43) is embedded in said binding agent and comprises at least one active portion (45), which is generally of substantially planar form, has a mesh-like structure giving to the active portion its own coherence, is comprises at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion (45), which is generally of substantially planar form and embedded in said binding agent (41), the active portion being produced from a metal material and constitutes preferred axis for propagation of the thermal flux within the joint and for the orientation of the cracks that may be produced in the joint.

- 13. (currently amended): Structure (11) according to claim 12, characterized in that each active portions (45) comprises a plurality of beams (47) which are arranged substantially parallel with a first the longitudinal direction (X-X').
- 14. (currently amended): Structure (11) according to claim 13, characterized in that each active portions (45) comprises a plurality of cross-members (49) which connect the beams (47) and which are arranged substantially parallel with a second direction (Y-Y'), distinct from the first longitudinal direction (X-X').
- 15. (previously presented): Structure (11) according to claim 14, characterized in that the total volume of the apertures (51) delimited by the beams (47) and the cross-members (49) is greater than the total volume of the beams (47) and the cross-members (49).
- 16. (currently amended): Structure (11) according to claim 12, characterized in that the reinforcement element (43) comprises—an at least two active—portion portions (45C, 45D) which are respectively opposite—two adjacent faces (24C, 24D) said first lateral face and another planar lateral face of the first filtration element, said other planar lateral face being adjacent to

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said first planar lateral face, and the active portions (25C, 25D) being are connected to each other.

- 17. (currently amended): Structure (11) according to any one of claims 12 to 16, characterized in that it comprises at least one cell (61) which comprises four filtration elements (15), (15) and a common reinforcement element (43), (43) having a sinuous shape, for the filtration elements (15), the common reinforcement element (43) shape and comprising at least three successive active portions (45) which are connected to each other in series and arranged opposite adjacent planar lateral faces (24) of the filtration elements (15) of the cell (61).
- 18. (previously presented): Structure (11) according to claim 17, characterized in that it comprises at least first and second cells (61A, 61B), at least one active portion (45A) of the reinforcement element (43A) of the first cell (61A) being arranged opposite a face (24B) of a filtration element (15B) of the second cell (61B).
- 19. (currently amended): Filtration structure (11) according to claim 12, wherein said active portion is arranged between the first planar lateral face and the second planar lateral face, the binding agent being in direct contact with said first and second lateral faces of a particulate filter for exhaust gases of an internal combustion engine of the type comprising:

-at least one first filtration element and at least two second filtration elements (15A, 15B), each filtration element being made of a ceramic material having an inlet face (21), a discharge face (23) and lateral faces (24), and comprising an assembly of adjacent inlet and outlet conduits separated by porous filtration walls (25) extending from the inlet face to the discharge face, the inlet conduits, open in the region of the inlet face and closed in the region of the discharge face, and the outlet conduits, open in the region of the discharge face and closed in the region of the inlet face, being arranged transposed, a lateral face (24B) of each one of said at

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least two second filtration elements being arranged opposite to a lateral face (24A) of said at least one first filtration element;

-a joint (17) for connecting said lateral faces (24A, 24B), which extends between said lateral faces, this joint (17) comprising a binding agent (41) and reinforcement means (43),

characterized in that said binding agent is a ceramic cement, in that the reinforcement means (43) comprises at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion (45), which is generally of substantially planar form and embedded in said binding agent (41), and in that the reinforcement element (43) comprises active portions (45C, 45D) opposite two adjacent lateral faces (24C, 24D) of said at least first filtration element, the active portions (25C, 25D) being connected to each other.

- 20. (canceled).
- 21. (canceled).
- 22. (canceled).
- 23. (canceled).
- 24. (canceled).
- 25. (canceled).
- 26. (canceled).
- 27. (canceled).
- 28. (canceled).
- 29. (canceled).
- 30. (canceled).
- 31. (canceled).

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- 32. (canceled).
- 33. (canceled).
- 34. (canceled).
- 35. (canceled).
- 36. (new): Structure according to claim 16, characterized in that the filtration element comprises four active portions which are respectively opposite the four lateral planar faces of the first filtration element, said active portions being connected together so that the reinforcement means is a sleeve surrounding the first filtration element.